

**HAZARD CONTROL PLAN AND WORK AUTHORIZATION** Page 1 of \_\_\_\_

This form is from ESH-17-035

1. Describe the work to be performed (use continuation page if needed) or give procedure number, revision number, and title.

HCP-ESH-17-TA53-XA, R1

Title: TA-53 Experimental Areas

ESH-17 work in various experimental areas at TA-53, the Los Alamos Neutron Science Center (LANSCE). Includes routine work, surveys, walk-throughs, tours, & transit to and from areas.

Applicable procedures: 53FMP 104-05, -07; also, general experimental area access.

2. Describe potential hazards associated with the work (use continuation page if needed).

1) Radiation hazards

a) external radiation (working in radiation areas, high rad areas, etc.)

b) contamination (contamination areas are encountered throughout TA-53)

2) Mechanical equipment hazards (mechanical & kinetic energy; working near such equipment)

3) Electrical hazards (working near high AC and DC voltage)

4) Cranes (work in areas with overhead cranes)

5) Cryogen hazards (working near ultracold fluids)

6) Chemical hazards (working near hazardous chemicals)

7) Pressurized gas bottle hazards (working near pressurized systems & gas bottles)

8) Slow-moving vehicles (encountering them on road OR driving them)

9) General work area hazards (see continuation page for list)

3. For each hazard, list the likelihood and severity, and the resulting initial risk level (before any work controls are applied, as determined according to LIR300-00-01.0, section 7.2)

1-a) external rad: frequent / negligible = Low

1-b) contamination: improbable / negligible = Minimal

2) mechanical: improbable / critical = Low

3) electrical: improbable / critical = Low

4) cranes: improbable / critical = Low

5) cryogens: occasional / moderate = Low

6) chemicals: improbable / critical = Low

7) pressurized gas: improbable / moderate = Minimal

8) slow vehicles: occasional / moderate = Low

9) work area: occasional / moderate = Low

Overall *initial* risk: ☐ Minimal ☒ Low ☐ Medium ☐ High

4. Applicable Laboratory, facility, or activity operational requirements directly related to the work:

☐ None ☒ List:

Work Permits required? ☒ No ☐ List:

1) Appropriate dosimetry (TLD) required for access to experimental areas

5. Describe how the hazards listed above will be mitigated (e.g., safety equipment, administrative controls, etc.):

APPLICABLE TO ALL HAZARDS: Be aware of surroundings, read & obey all postings. If situation appears to be unsafe, contact system owner or the TA-53 Central Control Room (667-5729) for assistance and advice. Obey all rules & utilize PPE as required for work in specific areas.

1-a & b) rad hazards: wear applicable dosimetry, read all postings, consult with ESH-1 (667-7069) to discuss RWP needs and other radiological issues. Plan work in advance to keep exposures ALARA.

Do NOT cross any radiological control barriers (e.g., yellow & magenta tape)

2) mechanical systems: Do not work on any facility mechanical equipment. If unsafe situation is observed (missing belt cover, etc.) or work on system is required, contact building manager & stay away.

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6. Knowledge, skills, abilities, and training necessary to safely perform this work (check one or both):



Group-level orientation (per ESH-17-032) and training to applicable procedure.



Other → Describe:

1) TA-53 Facility Specific training REQUIRED for all site residents &amp; others who work extensively on-site.

2) TA-53 Limited Access training, Restricted Access training if work in certain areas is required.

3) Radiological training appropriate to work area (e.g., Rad Worker I for work in Rad Areas)

7. Any wastes and/or residual materials? (check one) ☒ None ☐ List:

If generated under specific procedures, procedures will address disposal issues.

8. Considering the administrative and engineering controls to be used, the *residual* risk level (as determined according to LIR300-00-01.0, section 7.3.3) is (check one):

Minimal



Low



Medium (requires approval by Division Director)

9. Emergency actions to take in event of control failures or abnormal operation (check one):



None



List:

During LANSCE accelerator operation, the Central Control Room (CCR) and ESH-1 offices are staffed 24 hours, 7 days. Contact these offices for assistance as needed.

CCR: 667-5729; Building 4, room 203.

ESH-1 Field Office: 667-7069, Building 395, room 101.

After this form is approved, perform the work safely. Identify opportunities for improvements in safety and report these to the safety officer or group leader.

Preparer(s) signature(s) \_\_\_\_\_

Name(s) (print) \_\_\_\_\_ /Position \_\_\_\_\_

Date \_\_\_\_\_

[NOTE: Training to a procedure constitutes authorization.] **If this work is NOT described by a procedure:** I have reviewed the safety of this proposed work with the group safety officer and I commit to follow safe practices when performing this work.

Employee signature \_\_\_\_\_

Name (print) \_\_\_\_\_

Date \_\_\_\_\_

Additional employee signature (optional) \_\_\_\_\_

Name (print) \_\_\_\_\_

Date \_\_\_\_\_

Additional employee signature (optional) \_\_\_\_\_

Name (print) \_\_\_\_\_

Date \_\_\_\_\_

**Group leader or safety officer review.**

I have reviewed the proposed work with 1) the preparer(s) and 2) employees who will perform the work (if not described in a procedure) and I believe the hazards and safety concerns have been adequately addressed. The work as described above is hereby authorized. This authorization expires one year after the date below.

Group leader or safety officer signature \_\_\_\_\_

Name (print) \_\_\_\_\_

Date \_\_\_\_\_

This plan will be revised according to ESH-17-035. Group leader or safety officer: After completion, submit to ESH-17 Records Coord.

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**Hazard Control Plan continuation page. Give item number being continued.**

Item #2: List of hazards

9: General environmental hazards

- a) uneven floors (one room can have multiple "levels")
- b) slips, trips, falls (cart rails on floors, cables, etc.)
- c) snow & ice (some areas continuously in shade; FALLING ICE)
- d) lighting concerns (underground beam lines = no natural light)
- e) low headroom (beam lines, low signs, cable trays)
- f) cramped conditions (narrow access ways)
- g) noise (fans, power supplies, machinery)
- h) wildlife (snakes, racoons, mountain lions, elk)
- i) miscellaneous/general (e.g., fire in building, low oxygen, evacuation required)

Item #5: Hazard mitigation

3) electrical systems: Do not block access to power panels. Do not attempt to work on systems. Contact building manager or system owner for maintenance or other work.

4) cranes: be aware of surroundings in areas with cranes. Stay out of crane "cone of safety" when in areas with cranes in operation. This "cone of safety" is defined as a cone, based at floor level and centered under the crane load, with radius equal to height of the crane load above the floor, and a height from the floor to the crane load. **DO NOT WORK IN AREAS INSIDE THIS CONE OF SAFETY.** More information in Site-Specific training (see section 6, above).

5) cryogenics: listen for low oxygen alarms if working in area with cryogenics present.

6 & 7) chemicals and pressurized gas systems: be aware of systems in area. If unsafe situation identified, contact control room or system owner.

8) Slow vehicles: be aware of other vehicles, obey speed limits. If driving putzers, allow others to pass if possible. **DO NOT DRIVE FORKLIFTS UNLESS PROPERLY TRAINED.**

9) work area hazards:

- a - c) Contact building manager or system owner to mitigate extreme situations (move cables, sprinkle salt/sand on ice, etc.).
- d) carry flashlight at all times if working in underground areas; take "TA-53 Restricted Access training if working extensively in beam tunnels.
- e) Wear hard hat or bump cap if extensive work required in such areas.
- f) Do not block egress routes in cramped areas. Perform work in more open areas if possible.
- g) Note ESH-5 postings of noisy areas; call the FM office (665-2584) for questions. Wear earplugs when required, or any other times when personally desired.
- h) Contact FM office (665-2584) to notify animal control.
- i) Know your evacuation routes in each building where work is to be performed. Know the location of nearest telephone or communication box.